

is not possible under a prescribed condition even after the control mode had been changed for a predetermined period; and

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said control mode change instructing means further comprising a first instructing means for instructing a change of a control mode which instructs said drive circuit control means to change the control mode that is currently being executed, in response to said detection signal output from said first non-proper condition detecting means, and a second instructing means for instructing a change of a control mode which instructs said drive circuit control means to change the currently executed control mode instructed by said second non-proper condition detecting means to the original control mode when a non-proper condition of said drive motor has not been detected within said predetermined period, and which instructs said drive circuit control means to change the currently executed control mode instructed by said second non-proper condition detecting means, to a further separate control mode when non-proper condition of said drive motor has been detected within said predetermined period.

REMARKS

This Amendment Under 37 C.F.R. §1.111 is filed in reply to the outstanding Office Action of July 3, 2002, and is believed to be fully responsive thereto for reasons set forth below in greater detail.

In the Official Action, the Examiner has rejected several of the claims under 35 U.S.C §102(b) as being anticipated by either one of USP' 401 and USP' 502, and has also rejected several of the claims under 35 U.S.C. §103(a) as being allegedly obvious over USP' 502 in view of USP' 401.

On the other hand, the Examiner has allowed claims 33 to 36 and 40 to 44 (dependent on claim 33 only), and has indicated that the subject matter of claims 26, 30, 31, and 45 would be allowable if rewritten in independent form.

In reviewing the applied prior art and the Examiner's comments thereon, the applicant believes that the Examiner has partly misunderstood some technical features of the cited references with respect to the claimed features of the present invention. However, the applicant wishes to obtain an allowance by filing amendments to the present claims so as to further clarify the distinctions of the present claims over the cited references while taking the Examiner's comments into account.

The subject matter of claim 26 has been indicated to be allowable, and accordingly claim 26 has been amended so as to be an independent claim 26 by incorporating therein the subject matter of claims 24 and 25.

Claim 27 has been amended so as to be an independent claim while incorporating therein the subject matter of claims 24 and 28 and additional limitative explanations in a clearer claim format to more definitively distinguish over the applied prior art.

The subject matter of claim 30, which has been indicated to be allowable, has been placed in independent claim 29, with claims 31 and 32 being dependent thereon.

In claim 36, the phrase "supplies said compensation drive pulse to said drive circuit" has been changed to supplies predetermined compensation drive pulse to said drive circuit.

It should also be noted that although the Examiner has objected to the above-mentioned phrase in the present claim 36 as not being supported by the original specification, it should be pointed out that pages 26 to 29, in the original specification of this application, and Fig. 9, especially page 29, lines 9 to 15, of the original specification of this application clearly state that the prescribed compensation drive pulse Ph can be supplied to the drive circuit means 407 in response to the detection that the motor has not been normally rotated. Therefore, it is believed that the Examiner may have misunderstood the above-mentioned explanation in the original specification of this application.

Claims 37 to 39 have been amended so that each claim is dependent on any one of the newly amended independent claims 26, 27, 29 and 33.

Please note that in view of the objection to claims 38 and 39 as not corresponding to the Markush group of claim 37, the applicant has amended claims 38 and 39 to obviate that objection.

Claims 40 to 44 have also been amended so that each claim is now dependent on any one of the newly amended independent claims 26, 27, 29, and 33.

Claim 45 has been amended to be dependent on newly amended independent claim 26.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned **“Version with markings to show changes made.”**

This application is now believed to be in condition for allowance, and a Notice of Allowance is respectfully requested. If the Examiner believes a telephone conference might expedite prosecution of this case, it is respectfully requested that he call applicant's attorney at (516) 742-4343.

Respectfully submitted,

A handwritten signature in cursive script that reads "William C. Roch".

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

Claim 26 has been amended as follows to place the allowed subject matter of claim 26 in independent form with the subject matter of claims 24 and 25.

26. (Amended) An electronic watch comprising:

a power supply;

an oscillator circuit;

a means for generating a drive pulse;

a drive motor which drives a hand, in response to a drive pulse output from said drive pulse generating means;

a drive circuit for controlling drive of said drive motor; and

a drive circuit controlling means for controlling said drive circuit; and said electronic watch further comprising;

a means for detecting a non-proper condition which sense an occurrence of a condition in which proper drive of said drive motor is not possible under a prescribed condition;

means for instructing a change of a control mode which instructs said drive circuit controlling means to change the control mode that is currently being executed, in response to said detection signal output from said non-proper condition detecting means, wherein said means for instructing a change of a control mode instructs said drive circuit controlling means for controlling said drive circuit means to return to the original controlling mode which had been used before the current controlling mode was instituted, after said control mode had been

changed and no such detection signal has been output from said non-proper condition detecting means;

wherein said non-proper condition detecting means is a means for detecting electric power which outputs a detecting signal in response to a detection of reduction in power condition in said power supply; and

[according to claim 25,] wherein said drive pulse generation means is provided with a fast-forward (high-speed) pulse generation circuit which generates a fast-forward pulse and a low-voltage fast-forward pulse generating means that generates a low-voltage fast-forward pulse which has a pulse width that is greater than that of said fast-forward pulse, and wherein said drive circuit controlling means permits passage of said low-voltage fast-forward pulse, in response to said detection signal output from said electric power detecting means.

Claim 27 has been amended as follows to be an independent claim, with the subject matter of claims 24 and 28, to present a more clear claim format to further distinguish from the prior art.

27. (Amended) An electronic watch [according to claim 24,] comprising:

a power supply;

an oscillator circuit;

a means for generating a drive pulse;

a drive motor which drives a hand, in response to a drive pulse output from said drive pulse generating means;

a drive circuit for controlling drive of said drive motor; and

a controlling means for controlling said drive circuit; and said electronic watch further comprising:

a means for detecting a non-proper condition which sense an occurrence of a condition in which proper drive of said drive motor is not possible under a prescribed condition;

means for instructing a change of a control mode which instructs said drive circuit controlling means to change the control mode that is currently being executed, in response to said detection signal output from said non-proper condition detecting means, wherein said means for instructing a change of a control mode instructs said controlling means for controlling said drive circuit means to return to the original controlling mode after when said control mode had been changed and no such detection signal had been output from said non-proper condition detecting means, wherein said drive motor comprises a first drive motor and a second drive motor and wherein said non-proper condition detecting means is a means for monitoring a rotating condition of the second drive motor, while said control mode change instructing means is a means for instructing said drive circuit controlling means to make the control mode of said first drive motor changed, in response to said detection signal output from said non-proper condition detecting means and further wherein said electronic watch further comprises a load compensation control system which detects whether or not said drive motor had been rotated in response to a prescribed drive pulse which is supplied by said drive circuit means and in the case in which a judgment is made that said drive motor had not been rotated, which supplies a prescribed compensation drive pulse to said drive circuit means, thereby compensating the rotation of said drive motor and further wherein said non-proper condition detecting means is a means for detecting an estimation electric power level of said power supply which is discriminated by said load compensation control system [change the control mode of said first

drive motor, in response to said detection signal output from said non-proper condition detecting means].

Claim 29 has been amended as follows to incorporate therein the allowable subject matter of claim 30.

29. (Amended) An electronic watch comprising:

a power supply;

an oscillator circuit;

a means for generating a drive pulse;

a drive motor which drives a hand, in response to a drive pulse output from said drive pulse generating means;

a drive circuit for controlling drive of said drive motor; and

a drive circuit controlling means for controlling said drive circuit; and said drive pulse generating means further comprising;

a normal hand-drive pulse generation circuit which generates a normal hand-drive pulse and a non-normal hand-drive pulse generation circuit which generates a non-normal hand-drive pulse that differs from the normal hand-drive pulse, and said electronic watch further comprising;

a means for detecting a non-proper condition which sense an occurrence of a condition in which proper drive of said drive motor is not possible under a prescribed condition; and

means for instructing a change of a control mode which instructs said drive circuit controlling means to prohibit an output of said non-normal hand-drive pulse, in response

to said detection signal output from said non-proper condition detecting means; and

wherein said non-normal hand-drive pulse is a fast-forward pulse.

Claims 36-45 have been amended as follows, wherein the amendments to claims 36, 38 and 39 are believed to obviate the rejections thereof under 35 U.S.C. §112.

36. (Amended) An electronic watch according to claim 33, wherein said drive circuit controlling means supplies predetermined [said] compensation drive pulse to said drive circuit when said load compensation control system is stopped.

37. (Amended) An electronic watch according to [claim 24] any one of claims 26, 27, 29 and 33, wherein said drive pulse generating means comprises a normal hand-drive pulse generation circuit means which generates a normal hand-drive pulse and further comprising at least one means selected from a group of a low-voltage hand-drive pulse generating means, a fast-forward (high-speed) pulse generation circuit means, a low-voltage fast-forward pulse generating means, a reverse-rotation pulse generation circuit means, and a functional hand drive high-speed pulse generation circuit means.

38. (Amended) An electronic watch according to any one of claims 26, 27, 29 or 33, wherein said drive pulse generating means comprising a normal hand-drive pulse generation circuit means which generates a normal hand-drive pulse and further comprising at least one means selected from a group of a low-voltage hand-drive pulse generating means, a fast-forward (high-speed) pulse generation circuit means, a low-voltage fast-forward pulse generating means, a reverse-rotation pulse generation circuit means and a functional hand drive high-speed pulse generation circuit means, and further wherein if when at least one of said means selected from

the above-mentioned group including either one of said normal hand-drive pulse generation circuit means, said fast-forward (high-speed) pulse generation circuit means, said reverse-rotation pulse generation circuit means and said functional hand drive high-speed pulse generation circuit means, said drive pulse generating means thus selected generating [claim 37, wherein at least one of said means selected from a group of said normal hand-drive pulse generation circuit means, said fast-forward (high-speed) pulse generation circuit means, said reverse-rotation pulse generation circuit means, and said functional hand drive high-speed pulse generation circuit means, each of which being included in said drive pulse generating means generates] a plurality of types of drive pulses having mutually different drive capacities from each other.

39. (Amended) An electronic watch according to any one of claims 26, 27, 29, or 33, wherein said drive pulse generating means comprising a normal hand-drive pulse generation circuit means which generates a normal hand-drive pulse and further comprising at least one means selected from a group of a low-voltage hand-drive pulse generating means, a fast-forward (high-speed) pulse generation circuit means, a low-voltage fast-forward pulse generating means, a reverse-rotation pulse generation circuit means and a functional hand drive high-speed pulse generation circuit means, and further wherein said electronic watch further comprises a load compensation control system which detects whether or not said drive motor had been rotated in response to a prescribed drive pulse which is supplied by said drive circuit means and in the case in which a judgment is made that said drive motor had not been rotated, which supplies a prescribed compensation drive pulse to said drive circuit means, thereby compensating the rotation of said drive motor and further wherein said compensation drive pulse being included in at least one means selected from [claim 38, wherein said electronic watch further comprises a

load compensation control system which detects whether or not said drive motor had been rotated in response to a prescribed drive pulse which is supplied by said drive circuit means, and in the case in which a judgment is made that said drive motor had not been rotated, supplies a prescribed compensation drive pulse to said drive circuit means, thereby compensating for the rotation of said drive motor, and further wherein said compensation drive pulse includes at least one means selected from a group of] said normal hand-drive pulse generation circuit means, said fast-forward (high-speed) pulse generation circuit means, said reverse-rotation pulse generation circuit means, and said functional hand drive high-speed pulse generation circuit means.

40. (Amended) An electronic watch according to any one of claims [24] 26, 27, 29 and 33, wherein said control mode change instructing means, in response to a detection signal of said non-proper condition detection means, outputs an instruction to said drive circuit controlling means so as to stop the control mode which is currently being executed.

41. (Amended) An electronic watch according to any one of claims [24] 26, 27, 29 and 33, wherein said control mode change instructing means, in response to a detection signal of said non-proper condition detection means, outputs an instruction to said drive circuit controlling means so as to change a control mode which is currently being executed to another control mode.

42. (Amended) An electronic watch according to any one of claims [24] 26, 27, 29 and 33, wherein said control mode change instructing means, in response to a detection signal of said non-proper condition detection means, outputs an instruction to said drive circuit controlling means so as to replace a drive pulse used in the control mode currently being executed to another drive pulse.

43. (Amended) An electronic watch according to any one of claims [24] 26, 27, 29 and 33, wherein said electric power of said power supply is varied with the passage of time.

44. (Amended) An electronic watch according to any one of claims [24] 26, 27, 29 and 33, wherein said power supply comprises one type selected from a titanium-lithium battery, a large capacitance condenser, a secondary battery and a solar battery.

45. (Amended) An electronic watch according to claim 26 [24], wherein said non-proper condition detecting means further comprising a first non-proper condition detecting means for detecting a non-proper condition of said drive motor, which sense an occurrence of a condition in which proper drive of said drive motor is not possible under a prescribed condition, and a second non-proper condition detecting means for detecting a non-proper condition of said drive motor which senses an occurrence of a condition in which proper drive of said drive motor is not possible under a prescribed condition even after the control mode had been changed for a predetermined period; and

said control mode change instructing means further comprising a first instructing means for instructing a change of a control mode which instructs said drive circuit control means to change the control mode that is currently being executed, in response to said detection signal output from said first non-proper condition detecting mean, and a second instructing means for instructing a change of a control mode which instructs said drive circuit control means to change the currently executed control mode instructed by said second non-proper condition detecting means to the original control mode when a non-proper condition of said drive motor has not been detected within said predetermined period, and which instructs said

drive circuit control means to change the currently executed control mode instructed by said second non-proper condition detecting means, to a further separate control mode when non-proper condition of said drive motor has been detected within said predetermined period.